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WHAT TO DO ABOUT BOVINE TUBERCULOSIS

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University of California, College of Agriculture,
Division of Animal Husbandry,
Division of Dairy Industry,
Division of Veterinary Science;
California State Department of Agriculture,
Division of Animal Industry,
Division of Dairy Control;
The California Dairy Council;
The Board of Directors of the Pacific Slope Dairy Show;
The California State Veterinary Medical Association.

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WHAT TO DO ABOUT BOVINE TUBERCULOSIS

SAM H. GREENE,[1] C. M. HARING,[2] AND J. P. IVERSON[3]

Boards of health and city governments in many of the larger communities of California have established definite dates after which market milk (both pasteurized and raw) sold in those cities must come only from herds that have successfully passed the test for tuberculosis. These ordinances and regulations are separate from any State legislation. But under State law it is illegal *now* to retain tuberculous animals in herds from which milk or milk products are being used in the raw or unpasteurized state.

Every dairy farmer who expects to remain in business at a profit should have his herd tested for tuberculosis and begin *now* to clean out the disease from his premises.

IF THE HERD IS TUBERCULOSIS FREE THERE ARE THINGS THAT MUST BE DONE TO KEEP IT SO!

If no tuberculous animals are found, precautions should be taken to prevent introduction of the disease.

An infected herd is an expensive herd. Good business as well as good health make it advisable for the dairy farmer to eradicate tuberculosis from among his cattle. Delay is costly. One infected animal can spread the disease among an entire herd.

It is not practicable to try to cure tuberculosis in a dairy animal, but spread of the disease can be prevented. Many dairy farmers have cleaned tuberculosis from their herds and are keeping it out.

This circular outlines methods that have been found useful by the dairy farmers of California.

SUPPRESSION OF TUBERCULOSIS IN SLIGHTLY INFECTED HERDS

Authorities generally agree that a slightly infected herd is one in which not more than one in ten animals reacts to the test for tuberculosis.

The following procedure is recommended:

1. Dispose of all reactors, including any which have given doubtful or questionable reactions, as well as any non-reactors which, on

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physical examination, show symptoms of tuberculosis. A cow can be so far gone with disease that she will not react to the test.

2. Clean and disinfect the premises thoroughly, and do not depend entirely on chemical disinfectants. Greater dependence should be placed on thorough cleaning. Remove promptly all damp manure, for the smallest particle may harbor many tuberculosis germs. The tubercle bacillus dies in a few weeks in dry manure or soil, but under moist conditions has been known to live for more than a year.

3. Have a veterinarian re-test the herd with tuberculin in sixty to ninety days. Immediately remove all reactors and again clean and disinfect. So long as reactors are found, have a test made every six months. Even when the herd is believed to be free from reactors an annual test is recommended.

4. All new animals purchased should be subjected to the test for tuberculosis and *should come from herds that are free from reactors.* When it is not possible to procure animals from herds free from reactors, get them from herds in which the percentage of reactors is low, always less than 10 per cent. The new animals should be kept separate from the herd for sixty days, then tested, and, if none react, they may be put into the herd. *This procedure is important.*

NEW ANIMALS PURCHASED SHOULD COME FROM HERDS WHICH ARE FREE FROM REACTORS

The purchase of cattle from badly infected herds is dangerous even when the animals purchased have passed the test for tuberculosis. No one test will catch every animal that has the disease.

In buying cattle, the unit to deal with is the sound herd rather than the non-reacting animal.

SUPPRESSION OF TUBERULOSIS IN MORE SEVERELY INFECTED HERDS

The best course to pursue in herds where about three in ten animals react to the test for tuberculosis is not so definitely known as in slightly infected or in very badly infected herds.

One course is to separate the reactors from the non-reactors and remove immediately to the clean herd the calves dropped by the reactors. But this course is safe *only* when separate barns, equipment and utensils can be provided and the dairyman can be positive there is no contact between the two groups; also, he should have the benefit of technical advice at every step.

SUPPRESSION OF TUBERCULOSIS IN BADLY INFECTED HERDS

In badly infected herds one should proceed as if every animal were infected.

A badly infected herd may be considered to be one in which more than three animals in ten react to the test for tuberculosis.

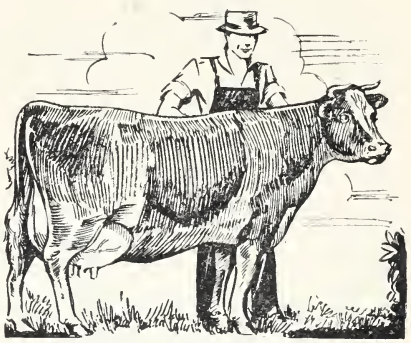
In badly infected herds all the mature cattle should be treated as if infected. The reason for this is that, on successive tests, too many reactors are found.

To control the disease in such a herd, dependence must be placed upon the following procedure:

1. Eliminate promptly all animals developing physical signs of the disease.

2. Remove from their mothers all calves at birth and raise them on boiled milk or pasteurized milk, or a solution of dry skim milk.

3. Keep all healthy young stock isolated from the infected herd and from all fields and water used for the tuberculous animals. Test them every six months by the intradermic method and remove all reactors. Test young calves more frequently, if possible.



She looks healthy, but—

The purpose of this is to build up a separate herd from the healthy young stock. Calves seldom are tuberculous when born.

DISPOSING OF REACTING CATTLE

The California law requires that cattle which react positively to the test for tuberculosis must be branded on the left jaw with the letter "T." The object of this branding law is to prevent tuberculous animals from being moved, by purchase or otherwise, into tuberculosis-free herds.

Only an approved licensed or official veterinarian may legally test cattle with tuberculin in California, and he must report the result of all tests to the Division of Animal Industry, Sacramento.

Slaughter for beef under inspection is the method recommended for disposal of most reacting cattle which show no visible signs of the

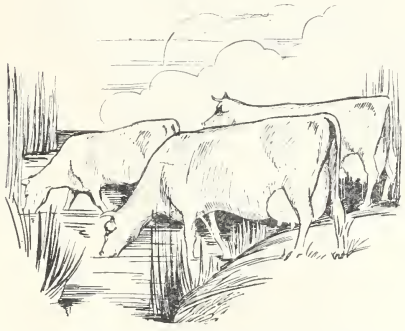
disease. In every case cattle must be carefully examined by an official inspector when killed, and if the disease is found to be extensive, the carcass must be condemned.

Retention of reacting branded cattle in herds, the milk or cream from which is to be pasteurized, is sometimes resorted to even in herds which are not badly infected instead of their slaughter for beef. This is a dangerous and expensive practice because healthy animals in the same herd are sure to contract the disease in time.

HOW A HERD IS INFECTED

Tuberculosis may be introduced into a healthy herd in a number of ways:

1. By the purchase of a bull or other animal that is infected with the disease. This animal may be apparently healthy at the time of purchase, but if previously exposed, the disease may develop and spread to other cattle.



Drinking places may be a source of infection.

2. By feeding calves with milk, buttermilk, or whey that has come from tuberculous cows. Therefore, all milk, skim milk, buttermilk, or whey, from any source, should be boiled before being fed to calves.

3. By showing cattle at those fairs and exhibitions where proper care is not taken to keep out diseased stock, or to disinfect the premises.

4. By shipping animals in cars or trucks that have not been properly disinfected, as these may have recently carried diseased cattle.

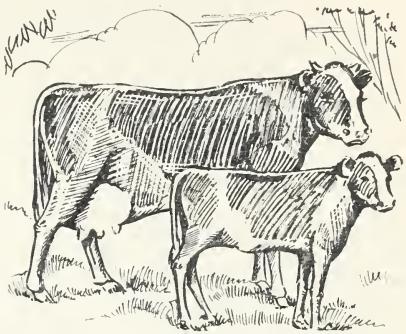
5. By holding cattle in barns, corrals, or loading chutes in which diseased cattle have been kept, and which have not been properly cleaned and disinfected.

6. By allowing the cattle to graze with diseased animals, or to come into contact with them over fences or in any other way.

7. By allowing the water supply to become contaminated by tuberculous animals. When cattle are permitted access to small ponds, water holes or troughs, these may become badly contaminated with infection from 'open cases.' The rapid spread of the disease on certain ranges is believed to be due in part to infected water.

HEIFER CALVES FROM HIGH-PRODUCING COWS

The first step necessary in a program to eliminate tuberculosis from California cattle is a general movement among dairymen to raise healthy heifer calves from their high-producing cows. This will afford a supply of relatively high-producing young cows which will meet all requirements, including the test for tuberculosis. The constantly increasing demand for healthy dairy animals insures a market at an attractive price for all such animals.



Raise more heifer calves from high-producing cows. Calves are seldom tuberculous when born.

ADDITIONAL INFORMATION AVAILABLE

For additional information concerning control of bovine tuberculosis, ask advice of your veterinarian or secure Agricultural Extension Service Circular 21 from your local farm advisor or from the College of Agriculture.

For information regarding calf care and feeding, apply to your farm advisor or write to the Division of Animal Husbandry, University Farm, Davis.

NOTICE

For specific advice concerning the handling of herds of tuberculous cattle, dairymen should apply to their respective veterinarians or to the following offices of the State Department of Agriculture:

State Division of Animal Industry, Sacramento,

or

Southern California Branch Office of State Division of Animal Industry, 784 South Central Avenue, Los Angeles.

For information concerning the requirements for *Federal-State Accredited Tuberculosis-free Herds,* apply in writing to either of the above state offices or to

The Inspector in Charge, U. S. Bureau of Animal Industry, Federal Building, Sacramento.

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